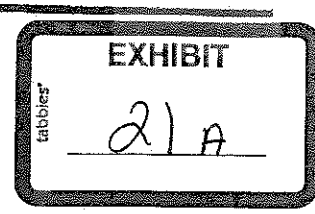
1634

(1)

FOAA 1

Breton, Mary B



From: Littell, David P
Sent: Tuesday, February 10, 2009 7:31 AM
To: Fisk, Andrew C; Mullen, Mike; Cassida, James
Subject: Fw: Health hazards Generated by wind turbines

Fyi only. We will look at and do a response when it comes in

David Littell, Commissioner
Maine DEP
Via Blackberry

----- Original Message -----
From: Mills, Dora A.
To: Littell, David P; Brooks, James P; Kerry, John
Sent: Tue Feb 10 05:03:26 2009
Subject: FW: Health hazards Generated by wind turbines

I received a voicemail last week from a Dr. Albert Aniel from Rumford, who appears to be a practicing internist there. I talked with him at length yesterday, and he sent me a follow up email (way below). Included in his email was an attachment that says it is from the Rumford Hospital's medical staff and is an open letter asking for a moratorium on all wind turbine projects because of the need for more research on possible health effects. He says this letter has been sent to area newspapers and to Commissioner Littell and Director Kerry. Dr. Aniel's resources are from non-peer reviewed sources. I have tried to point him in the direction of peer reviewed sources in my email below.

I wanted you to know about my correspondence with him, which is below. Feel free to let me know if I can be of further help.

Thank you. Dora

From: Mills, Dora A.
Sent: Tuesday, February 10, 2009 4:49 AM
To: 'athos'
Subject: RE: Health hazards Generated by wind turbines

Dr. Aniel: Thank you for your phone call and follow up email. I did some scanning overnight of some of the research on health effects due to wind turbines as well as existing Maine law. The British Medical Journal article from Sweden below I found helpful. Comparing their findings to existing Maine law, it appears our own law (under "Maine DEP Statute") is quite comprehensive and inclusive of the acoustical issues related to wind turbine development. Anyway, I hope some of the links below may be helpful to your own research. Dora

Dora Anne Mills, MD, MPH

State Health Officer

Director, Maine CDC/DHHS

(2)

FOAA 2
1635

Maine DEP Statute

38 M.R.S.A., Section 343

DEP Rules on Title 38 Section 343

http://www.maine.gov/sos/cec/rules/06/096/096c375.doc

Maine SPO Noise Technical Assistance Bulletin

http://www.maine.gov/spo/landuse/docs/techassist/techassistbulletins/noisetabulletin.pdf

US Dept of Energy's New England Wind Power Website on Wind Turbine Sound – this has a good summary and links to references

http://www.windpoweringamerica.gov/ne_issues_sound.asp

British Medical Journal 2007 Swedish Study (Eja Pedersen)

http://oem.bmj.com/cgi/content/full/64/7/480?ijkey=b1a1ae4a98c9453315a90941395e0a05262aca53

Survey in Sweden of residents near wind turbines found annoyance increased with increased sound pressure levels (SPLs), and increased annoyance was associated with lower sleep quality and negative emotions. Annoyance levels were found at relatively low SPLs. References listed in this article include helpful resources.

A Wind Area Study of perceptions and Annoyance

Noise Annoyance from Wind Turbines – A Review 2003 Sweden Environmental Protection Agency

http://www.barrhill.org.uk/windfarm/noise/10%20pederson.pdf

Found no evidence of health problems, reviews the variety of noise regulation laws in place in Europe

US Dept of Energy Wind Turbine Aeroacoustic Research:

http://www1.eere.energy.gov/windandhydro/wind_research_enable.html#research

"Turbine noise can be caused by rotor speed, blade shape, tower shadow, and other factors. The program is sponsoring both wind tunnel and field tests to develop a noise prediction code that turbine manufacturers can use to ensure that new rotor designs and full systems aren't too noisy. This is especially true for high-growth U.S. markets for small wind turbines that will demand quieter rotors, especially when turbines are sited in residential neighborhoods. Small turbines operate at high rotational speeds and tend to spin even if they are furled (pointed out of the wind). Aeroacoustics research activities will be conducted to explore how to reduce noise produced by distributed wind turbines in a variety of wind regimes and to develop a noise standard with industry participants that can be used for the growing domestic distributed wind turbine market. This research will support the program's public-private partnerships, both directly in working with industry and indirectly in providing necessary underlying research.

In the longer term, program researchers will work to develop physics-based aeroacoustics codes for both design and problem solving applications. These will enable more slender blades and higher tip speeds, enhancing both cost and performance of future designs."

US Dept of Energy's Wind Energy Guide for County Commissioners:
http://www.nrel.gov/wind/pdfs/40403.pdf

Page 6: An operating modern wind farm at a distance of 750'-1,000' is no louder than a kitchen refrigerator or moderately quiet room.

Dept of Energy's Consumer Guide on Small Wind Turbines
http://apps1.eere.energy.gov/consumer/your_home/electricity/index.cfm/mytopic=10930
<http://apps1.eere.energy.gov/consumer/your_home/electricity/index.cfm/mytopic=10930>

"Noise Issues: The sound level of most modern residential wind turbines is slightly above the ambient wind noise. This means that while the sound of the wind turbine may be picked out of surrounding noise if a conscious effort is made to hear it, a residential-sized wind turbine is not a significant source of noise under most wind conditions."

Wind Turbine Noise Issues: A white paper prepared by Renewable Energy Research Laboratory, U of Massachusetts, 2004:
http://www.town.manchester.vt.us/windforum/aesthetics/WindTurbineNoiseIssues.pdf

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From: athos [mailto:athos@wildblue.net]
Sent: Monday, February 09, 2009 5:19 PM
To: Mills, Dora A.
Subject: Health hazards Generated by wind turbines

Dear Dr mills

(4)

It certainly was a refreshing pleasure to talk to you today.

Here are some references along with the above statement:

www.windturbinenoisehealthhumanrights.com (the best as overview 137 pages long)

www.ninapierpont.com (who testified to the NY legislature)

www.vibroacousticsyndrome.com (the importance of inaudible sound generated pathology)

George W Kamperman study

Our medical staff would really appreciate being kept abreast of your conclusions and recommendations.

Most sincerely

The medical staff of Rumford Community Hospital

Albert Aniel Md

Click the OneNote attachment if you want to view or edit the notes in OneNote.
If you don't have OneNote 2007, you can click the second attachment to view the notes as a Web page.

You can download a free OneNote trial version from:
http://r.office.microsoft.com/r/rlidOneNoteTrial?clid=1033&ver=12&app=onenote.exe&p1=12

From: Mills, Dora A. 1638
Sent: Wednesday, February 11, 2009 6:23 PM
To: Littell, David P
Cc: Fisk, Andrew C; Mullen, Mike; Cassida, James
Subject: RE: Noise Regulations

FOAA 5

ank you very much, David. I would be very interested in learning more from you all at DEP – this is a new topic to me, but a very erested one, and if we have a group of physicians making claims, I would like to be as well prepared as possible.

so, if DEP has easily accessible data on the amounts of pollution coming into Maine from fossil fuels, that would be helpful. In the A I quickly developed this am, I included some data from a NRCM source, which I suspect originates from DEP. If I can use P's original data that would seem to be best. And, if there are other DEP data that would be helpful for me to include to refute claims made by the Rumford medical staff, that would be most appreciated.

ank you! Dora

GNSI

om: Littell, David P
nt: Wednesday, February 11, 2009 4:35 PM
: Mills, Dora A.
: Fisk, Andrew C; Mullen, Mike; Cassida, James
bject: RE: Noise Regulations

ra, thank you for these sources and your previous email altering us to your contact on this.

ise has been an issue we looked at last year to determine whether our existing rules are adequate as part of the wind power task ce. The Wind Power Task Force asked us for an analysis and we provided it, asking for the authority to modify operational uirements if we later find a noise issue that the application noise analysis did not indicate would be present at a protected ation (meaning a residence).

cause these issues can get very detailed and technical (different types of noise, different atmospheric conditions, different ground ditions such as leaves and hard ice covered snow) we have retained the services of an outside noise expert to review noise dy submissions as part of applications and compliance evaluations (such as Mars Hill).

n copying Andy Fisk who you know and our acting division director Mike Mullen and director of licensing Jim Cassida on the rces you provide as well as more information is often useful. Let us know if you want to get together to discuss this as we would ue the expert input of CDC.

rid

m: Mills, Dora A.
t: Wednesday, February 11, 2009 2:06 PM
Littell, David P
ject: Noise Regulations
portance: High

n't know who at Maine DEP oversees noise regulations. In my reading the last couple of days on wind turbine es, I did come across Mass DEP regulations as well as two very recent articles from Canada proposing some ways to ress unique features of wind turbines in measuring or setting standards for noise levels. These three sources are ted in below. As I mentioned in the previous email, it appears that Maine's rules have not been updated since 1989, gh that may not be true if they've been recently updated. University of Massachusetts also has a research lab on

is subject, but thought I'd just share the information I came across when looking into the health effects issue.

(6)

1639

FOAA 6

ease let me know if I can be of further help.

ıank you! Dora

assachusetts DEP Regulations
tp://www.nonoise.org/lawlib/states/mass/mass.htm
source of sound will be considered to be violating the Department's noise regulation (310 CMR 7.10) if the source:
creases the broadband sound level by more than 10 dB(A) above ambient, or
oduces a "pure tone" condition - when any octave band center frequency sound pressure level exceeds the two
ljacent center frequency sound pressure levels by 3 decibels or more.
ese criteria are measured both at the property line and at the nearest inhabited residence. Ambient is defined as the
ckground A-weighted sound level that is exceeded 90% of the time measured during equipment operating hours. The
ıbient may also be established by other means with the consent of the Department.

Proposal for Evaluating the Potential Health Effects of Wind Turbine Noise for Projects Under the Canadian
ıvironmental Assessment Act
p://www.ingentaconnect.com/search/article;jsessionid=kqu0ghqe6gbu.alice?
le=Noise+annoyance+in+Canada&title_type=tka&year_from=1998&year_to=2009&database=1&pageSize=20&index
ith, Stephen E.; Michaud, David S.; Bly, Stephen H.P.Source: Journal of Low Frequency Noise, Vibration and Active
ntrol, Volume 27, Number 4, December 2008 , pp. 253-265(13)The advice that Health Canada provides on the health
ects of noise is generally based only on well-accepted scientific evidence for a link between noise exposure and
alth. For quiet rural areas, in which annoyance reactions towards intruding noise may be augmented, this paper
oposes noise mitigation if predicted wind turbine noise levels exceed 45 dBA at noise sensitive receptors. In this
oposal, a cautious approach is adopted by using predicted noise levels that are evaluated at the wind speed that
oduces the highest wind turbine noise, and background noise is evaluated in calm winds. This accounts for sheltering
obstructions. Wind speed gradient effects related to stable atmospheric conditions are also accounted for with this
proach. The proposal is based on predicted project-noise related changes in long-term high annoyance, rattle and sleep
ıturbance. Noise mitigation for wind turbine construction noise is proposed based on potential for expectation of
mplaints.

orporating Low Frequency Noise Legislation for the Energy Industry in Alberta, Canada
p://www.ingentaconnect.com/search/article;jsessionid=kqu0ghqe6gbu.alice?
e=Noise+annoyance+in+Canada&title_type=tka&year_from=1998&year_to=2009&database=1&pageSize=20&index
thors: DeGagne, David C.; Lapka, Stephanie D.Source: Journal of Low Frequency Noise, Vibration and Active
ntrol, Volume 27, Number 2, September 2008 , pp. 105-120(16) Environmental noise from energy industry facilities
Alberta, Canada, is regulated by the province's Energy Resources Conservation Board (ERCB) (until 2008 known as
Alberta Energy and Utilities Board [EUB]) as set out in Directive 038: Noise Control. The 2007 edition of the
ective, which comprises a comprehensive policy and guide, adopts A-weighted energy equivalent sound levels
Aeq), with sound pressure level criteria, as the primary measurement system for a receptor location. With the receptor
ng some distance from the energy industry noise source, the high and medium frequency components can dissipate or
absorbed by air and ground conditions, leaving mostly low frequency noise (LFN). Consequently, A-weighted
asurements do not reflect the full annoyance potential of the remaining industrial noise. Complaints related to LFN

ire often described by the affected party as a deep, heavy sound, like "humming", sometimes with an accompanying vibration. In some cases, the direction of the source of the LFN will be unknown to the receptor. However, it is the complainant that is most able to detect the presence of the LFN, signifying a particular sensitivity of the individual to the sound while others in the same family may not be able to detect the sound at all. To make a proper determination for the presence of LFN, the data must be collected during a time when environmental conditions are representative of when the sound is annoying. Residents who are impacted by LFN may suffer from sleep disturbances, headaches, and in some cases chronic fatigue. This paper examines the work undertaken by the ERCB to understand the issue, the various metrics tested to easily identify LFN, and finally the approach that would be incorporated into the new 2007 edition of Directive 038: Noise Control to address the problem.

Breton, Mary B FOAA 8 1641

From: Littell, David P
Sent: Wednesday, February 11, 2009 6:35 PM
To: Mills, Dora A.
Cc: Fisk, Andrew C; Mullen, Mike; Cassida, James; Brooks, James P
Subject: RE: Noise Regulations

Data on the air pollution - we wish more people would ask!

What do you want:

(1) climate change pollutants (carbon dioxide and carbon dioxide equivalents)
(a) all sources from fossil fuels (point sources, transportation, agricultural/forestry?
(b) power plants from fossil fuels?
(c) all air emitting sources (point sources)

2) Ozone precursors (NOx/vocs)?
(a) all sources from fossil fuels (point sources, transportation, agricultural/forestry?
(b) power plants from fossil fuels?
(c) all air emitting sources (point sources)

3) Particulates (fine and course PM?)
I am not sure we can break this down like the other two sources but can check.
4) All the above?
5) Other
We can make some practical observations if that helps as well, there is no question clean renewables reduce air pollution.

From: Mills, Dora A.
Sent: Wednesday, February 11, 2009 6:23 PM
To: Littell, David P
Cc: Fisk, Andrew C; Mullen, Mike; Cassida, James
Subject: RE: Noise Regulations

Thank you very much, David. I would be very interested in learning more from you all at DEP – this is a new topic to me, but a very interested one, and if we have a group of physicians making claims, I would like to be as well prepared as possible.

Also, if DEP has easily accessible data on the amounts of pollution coming into Maine from fossil fuels, that would be helpful. In the Q&A I quickly developed this am, I included some data from a NRCM source, which I suspect originates from DEP. If I can use DEP's original data that would seem to be best. And, if there are other DEP data that would be helpful for me to include to refute the claims made by the Rumford medical staff, that would be most appreciated.

Thank you! Dora

From: Littell, David P
Sent: Wednesday, February 11, 2009 4:35 PM
To: Mills, Dora A.
Cc: Fisk, Andrew C; Mullen, Mike; Cassida, James
Subject: RE: Noise Regulations

Dora, thank you for these sources and your previous email altering us to your contact on this.

Noise has been an issue we looked at last year to determine whether our existing rules are adequate as part of the wind power task force. The Wind Power Task Force asked us for an analysis and we provided it, asking for the authority to modify operational requirements if we later find a noise issue that the application noise analysis did not indicate would be present at a protected location (meaning a residence).

Because these issues can get very detailed and technical (different types of noise, different atmospheric conditions, different

1642

ground conditions such as leaves and hard ice covered snow) we have retained the services of an outside noise expert to review noise study submissions as part of applications and compliance evaluations (such as Mars Hill).

I am copying Andy Fisk who you know and our acting division director Mike Mullen and director of licensing Jim Cassida on the sources you provide as well as more information is often useful. Let us know if you want to get together to discuss this as we would value the expert input of CDC.

David

9

FOAA 9

From: Mills, Dora A.
Sent: Wednesday, February 11, 2009 2:06 PM
To: Littell, David P
Subject: Noise Regulations
Importance: High

I don't know who at Maine DEP oversees noise regulations. In my reading the last couple of days on wind turbine issues, I did come across Mass DEP regulations as well as two very recent articles from Canada proposing some ways to address unique features of wind turbines in measuring or setting standards for noise levels. These three sources are pasted in below. As I mentioned in the previous email, it appears that Maine's rules have not been updated since 1989, though that may not be true if they've been recently updated. University of Massachusetts also has a research lab on wind turbines that you're probably quite familiar with, but they also appear to be a source for information on setting standards for noise issues. I'm sure DEP has experts, including yourself, who know a great deal more than I do about this subject, but thought I'd just share the information I came across when looking into the health effects issue.

Please let me know if I can be of further help.

Thank you! Dora

Massachusetts DEP Regulations
ttp://www.nonoise.org/lawlib/states/mass/mass.htm
source of sound will be considered to be violating the Department's noise regulation (310 CMR 7.10) if the source:
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Proposal for Evaluating the Potential Health Effects of Wind Turbine Noise for Projects Under the Canadian nvironmental Assessment Act
ttp://www.ingentaconnect.com/search/article;jsessionid=kqu0ghqe6gbu.alice?tle=Noise+annoyance+in+Canada&title_type=tka&year_from=1998&year_to=2009&database=1&pageSize=20&in
eith, Stephen E.; Michaud, David S.; Bly, Stephen H.P.Source: Journal of Low Frequency Noise, Vibration and ctive Control, Volume 27, Number 4, December 2008 , pp. 253-265(13)The advice that Health Canada provides on ie health effects of noise is generally based only on well-accepted scientific evidence for a link between noise xposure and health. For quiet rural areas, in which annoyance reactions towards intruding noise may be augmented, iis paper proposes noise mitigation if predicted wind turbine noise levels exceed 45 dBA at noise sensitive receptors. i this proposal, a cautious approach is adopted by using predicted noise levels that are evaluated at the wind speed iat produces the highest wind turbine noise, and background noise is evaluated in calm winds. This accounts for ieltering by obstructions. Wind speed gradient effects related to stable atmospheric conditions are also accounted for ith this approach. The proposal is based on predicted project-noise related changes in long-term high annoyance,

rattle and sleep disturbance. Noise mitigation for wind turbine construction noise is proposed based on potential for expectation of complaints.

10

FOAA 10

Incorporating Low Frequency Noise Legislation for the Energy Industry in Alberta, Canada
http://www.ingentaconnect.com/search/article;jsessionid=kqu0ghqe6gbu.alice?title=Noise+annoyance+in+Canada&title_type=tka&year_from=1998&year_to=2009&database=1&pageSize=20&in
Authors: DeGagne, David C.; Lapka, Stephanie D.Source: Journal of Low Frequency Noise, Vibration and Active Control, Volume 27, Number 2, September 2008 , pp. 105-120(16) Environmental noise from energy industry facilities in Alberta, Canada, is regulated by the province's Energy Resources Conservation Board (ERCB) (until 2008 known as the Alberta Energy and Utilities Board [EUB]) as set out in Directive 038: Noise Control. The 2007 edition of the directive, which comprises a comprehensive policy and guide, adopts A-weighted energy equivalent sound levels (LAeq), with sound pressure level criteria, as the primary measurement system for a receptor location. With the receptor being some distance from the energy industry noise source, the high and medium frequency components can dissipate or be absorbed by air and ground conditions, leaving mostly low frequency noise (LFN). Consequently, A-weighted measurements do not reflect the full annoyance potential of the remaining industrial noise. Complaints related to LFN are often described by the affected party as a deep, heavy sound, like "humming", sometimes with an accompanying vibration. In some cases, the direction of the source of the LFN will be unknown to the receptor. However, it is the complainant that is most able to detect the presence of the LFN, signifying a particular sensitivity of the individual to the sound while others in the same family may not be able to detect the sound at all. To make a proper determination for the presence of LFN, the data must be collected during a time when environmental conditions are representative of when the sound is annoying. Residents who are impacted by LFN may suffer from sleep disturbances, headaches, and in some cases chronic fatigue. This paper examines the work undertaken by the ERCB to understand the issue, the various metrics tested to easily identify LFN, and finally the approach that would be incorporated into the new 2007 edition of Directive 038: Noise Control to address the problem.

1644

Breton, Mary B

(11)

FOAA 11

From: Littell, David P
Sent: Wednesday, February 11, 2009 6:39 PM
To: Brooks, James P; Fisk, Andrew C
Cc: Garrett, Deborah N; Cassida, James
Subject: FW: Wind Turbine Points
Importance: High
Attachments: Wind Turbine Points 02 11 09.doc

Jim (Brooks), can you look at point 6 to see if valid, if we want CDC to quote a source of ours.

Andy, can you look at the noise treatment in the other points to see if consistent with our guidelines and information we provide. This piece will be good to have to address these issues I believe.

Thanks.

David

From: Mills, Dora A.
Sent: Wednesday, February 11, 2009 1:57 PM
To: Harvey, Brenda; Green, Geoffrey; Martins, John A; Littell, David P; Kerry, John; Farmer, David W; Ende, Patrick
Subject: Wind Turbine Points
Importance: High

Attached is a rough draft of a Q&A I drafted to answer the questions that the Sun Journal is asking in response to the Rumford Hospital's medical staff letter calling for a moratorium on wind turbines until further research delineates and mitigates health effects. I've pasted the medical staff's letter below this email. I do not find evidence to support their conclusions, and I state that in the last question in the FAQ. There are no firm statements I could find from non-industry sources stating there are no adverse health effects from wind turbines, but that would be true of most products.

I did not state this in the Q&A, but unless DEP rules have been recently updated and are not online yet, there may be room for improving the noise rules for developments to take in account wind farms. The last time these rules were updated appear to be 1989. Massachusetts has rules that take in account the change over ambient noise levels rather than a level cap. And, there are some proposals from Canada that take into account low frequency noise emissions. However, that said, I am not a noise expert and Maine is fortunate to have statute and rules on noise levels in place, given that many states do not. I will send my findings under separate a cover to Commissioner Littell on this matter.

Please review the enclosed Q&A and provide any feedback. I started working on this very early (2 am) today, and have also been busy doing other things, so I'm sure it needs some refinement. The reporter wanted to talk with me today or tomorrow, so if I can get feedback on this by late today or early tomorrow am, that would be great, and at least I can use this as my speaking points.

Also, I did not spend much time in the Q&A writing about the medical staff's sources of information, but I did check them out, and can tell the reporter, as I did yesterday (I had checked a few out early yesterday morning after reading the email from Dr. Aniel) that they are not from peer-reviewed studies. Most of the information was not from legitimate sources, though some were and had misinterpreted.

Thank you! Dora

Health hazards Generated by wind turbines

As members of the Rumford Community Hospital medical staff we endorse the concept of alternative energy including but not limited to wind turbines.

As wind turbine generated power has been introduced on an industrial level around the country as well as in the world , there is literature emerging worldwide expressing a multitude of side effects affecting those who live , work, attend school in the vicinity of wind farms.

These health hazards include problems arising not only from the audible noise frequencies but also from inaudible low frequency noise waves.

There are growing scientific observations and studies suggesting that some people living within 2 to 6 miles of these industrial "wind farms" area affected at a variety of levels from a variety of symptoms.

In light of these growing serious medical concerns we propose a moratorium on the building of any such "wind farms" for at least a year and possibly longer until more research is being done on the public health impact that such facilities can and will have on a segment of the communities surrounding such technology.

The Medical Staff of Rumford Community Hospital

1646

%HA for WT and other noises

Wednesday, December 17, 2008
10:55 PM

(13)

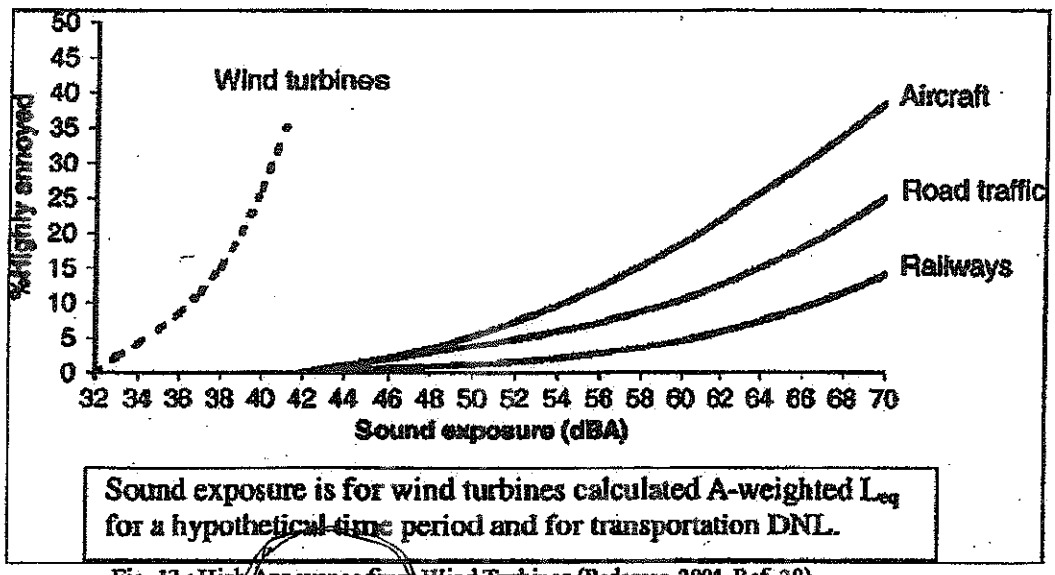


Fig. 13 : High Annoyance from Wind Turbines (Pederson 2004, Ref. 20)

A 1500

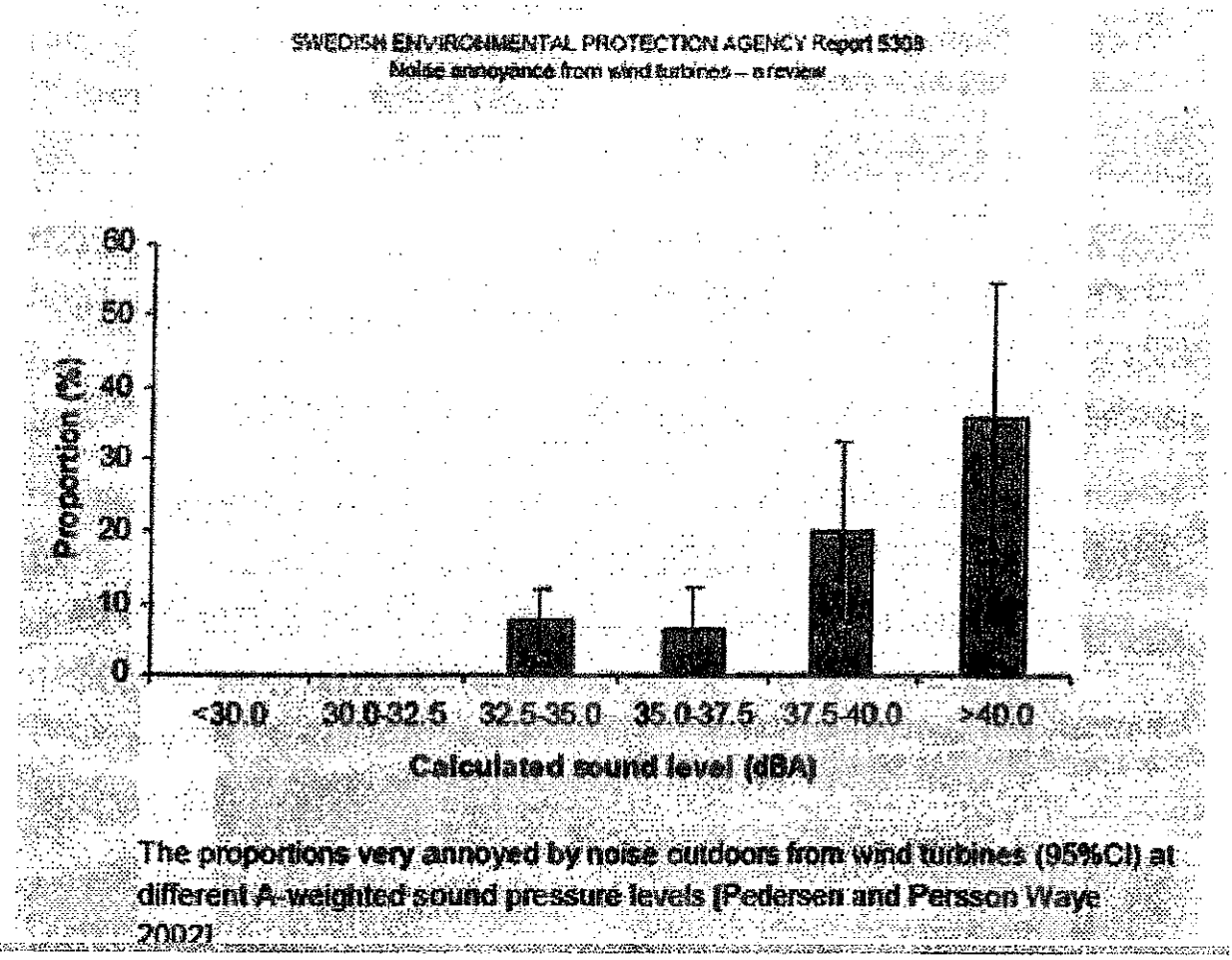
%HAvs dBA for Wind Turbines

Wednesday, December 17, 2008
10:57 PM

14

FOAA 14

1647



The proportions very annoyed by noise outdoors from wind turbines (95%CI) at different A-weighted sound pressure levels [Pedersen and Persson Waye 2002]

1648 15 FOAA 15

Cassida, James

From: Fisk, Andrew C
Sent: Tuesday, March 03, 2009 4:18 PM
To: Mills, Dora A.
Cc: Boutilier, Lynn A; Littell, David P; Cassida, James
Subject: FW: Wind Turbine Points revised 2-26-09.doc
Attachments: Wind Turbine Points revised 2-26-09.doc

ora,

ttached is a vetted and edited version of your talking points on wind noise. Please hold these for our conversation that we have :heduled between DEP, yourself (and others as you need), and our noise consultant on Thursday.

vould like the two of you to discuss your mutual observations on low frequency noise (<250 Hz). Warren Brown is evaluating ese frequencies generated by wind turbines. He is not a medical doctor but is looking at some studies and evaluating the esence of these noises.

ıanks, sorry this took a bit but we've been having conversations over here.

ndrew Fisk
ureau Director, Land & Water Quality
laine Department of Environmental Protection

)7-287-7671
ww.maine.gov/dep

FOAA 16

DORA MILLS PREPARED COMMENTS 1649

Wind Turbine Neuro-Acoustical Issues

Dora Anne Mills, MD, MPH Maine CDC/DHHS

February 26, 2009

1. What protections are in Maine law regarding excessive noise and vibrations?
Maine DEP has rules that apply to all developments in organized areas of the state and in towns without a more restrictive noise ordinance. The rules recognize in its text that excessive noise can degrade health and welfare of nearby neighbors and propose limits based on the type of development in the area surrounding the noise. They limit noise levels for routine operation of a proposed development: to 75 dBA at any time; to 60 dBA during the daytime and 50 dBA during the nighttime for non-commercial and non-industrial areas; and to 55 dBA daytime and 45 dBA nighttime for areas in which ambient sounds are 45 dBA or less daytime or 35 dBA or less nighttime.

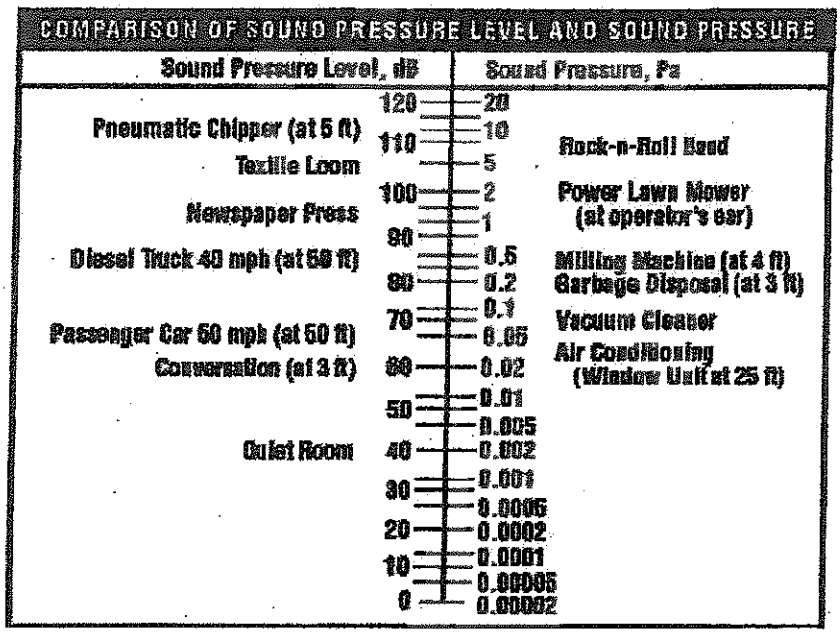
Maine DEP also has retained the services of a noise expert to review noise study submissions as part of wind turbine applications and compliance evaluations.

In summary: Maine law appears to essentially place a 45 dBA noise limit on most wind turbine projects in Maine. A 5 dBA variance to limits may be granted upon specific findings that concern pre-development existing ambient noises that are in excess of a particular standard. For compliance with the rule noise levels are measured at the boundary of the property owned by the proposed developer.

Sources:

- Maine DEP rule-making authority on noise is in Title 38 Section 343
  Rules are in Chapter 375, Section 10:
  http://www.maine.gov/sos/cec/rules/06/096/096c375.doc
- Maine SPO Noise Technical Assistance Bulletin
  http://www.maine.gov/spo/landuse/docs/techassist/techassistbulletins/noisetabulletin.pdf

2. What do different noise levels compare to?
40 dBA is comparable to a quiet room. 55 dBA is comparable to a household room or office in which there is normal background vibration and sounds such as is commonly found from household appliances.



Canadian Centre for Occupational Health and Safety
(see www.ccohs.ca/oshanswers/phys_agents/noise_basic.html).

3. What kinds of noises are expected from wind turbines?
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- US Dept of Energy's Wind Energy Guide for County Commissioners:
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  Page 6: An operating modern wind farm at a distance of 750'-1,000' is no louder than a kitchen refrigerator or moderately quiet room.
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Sources:

- Noise Annoyance from Wind Turbines – A Review 2003 Sweden Environmental Protection Agency
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Low frequency and infrasound (lower than what is perceptible) vibrations are very common in our background, and known to be emitted from many household appliances and vehicles. Exposure to very intense low frequency noise can be annoying and may adversely affect overall health, though these levels appear to be more intense than what is measured from modern wind turbines.

Reviews found in peer reviewed journals of the possible health effects of low frequency noise have not found any health effects (several articles and additional references in them below).

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  http://www.wind.appstate.edu/reports/06-06Leventhall-Infras-WT-CanAcoustics2.pdf
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- There are tremendous potential health benefits to wind turbines, including reductions in asthma, other lung diseases, heart disease, and cancer.
- Wind turbines mean less dependency on foreign oil and coal that contribute to global warming and pollution (coal produces carbon dioxide, acid rain, smog, particulate pollution, carbon monoxide, and mercury). Maine's highest in the nation rates of asthma and high rates of cancer can be positively impacted by less dependency on these sources.
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  - 464,520 tons per year of CO2
  - 252 tons per year of SO2
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7.What about a moratorium on wind turbine projects?

- I do not find evidence to support a moratorium on wind turbine projects at this time. The articles cited by those who are in favor of a moratorium are either from non-peer reviewed journals or are misinterpreted analysis from peer reviewed journals.
- If there is any evidence for a moratorium, it is most likely on further use of fossil fuels, given their known and common effects on the health of our population.

Basic Wind Turbine Noise-Related Resources:

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- Canada Center for Occupational Health and Safety, Noise: Basic Information
  http://www.ccohs.ca/oshanswers/phys_agents/noise_basic.html
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1654 DORA MILLS EDITED COMMENTS FOAA 21

DRAFT **Wind Turbine Neuro-Acoustical Issues** BY DEP
February 11, 2009
Dora Anne Mills, MD, MPH Maine CDC/DHHS

1. What protections are in Maine law regarding excessive noise and vibrations?
Maine DEP has rules that apply to all developments in organized areas of the state and in towns without a more restrictive noise ordinance. The rules recognize that excessive noise can degrade health and welfare of nearby neighbors. They limit noise levels for routine operation of a proposed development: to 75 dBA at any time; to 60 dBA during the daytime and 50 dBA during the nighttime for non-commercial and non-industrial areas; and to 55 dBA daytime and 45 dBA nighttime for areas in which ambient sounds are 45 dBA or less daytime or 35 dBA or less nighttime.

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In summary: For quiet rural locations, Maine law essentially places a 45 dBA noise limit on most wind turbine projects in Maine. These noise levels are measured at the boundary of the property owned by the proposed developer, which creates a more conservative threshold than measuring directly at a home or other occupied location.

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Sources:

- Maine DEP rule-making authority on noise is in Title 38 Section 343
  Rules are in Chapter 375, Section 10:
  http://www.maine.gov/sos/cec/rules/06/096/096c375.doc
- Maine SPO Noise Technical Assistance Bulletin
  http://www.maine.gov/spo/landuse/docs/techassist/techassistbulletins/noisetabulletin.pdf

2. What do different noise levels compare to?
40 dBA is comparable to a quiet room. 55 dBA is comparable to a household room or office in which there is normal background vibration and sounds such as is commonly found from household appliances. Many rural locations where wind turbine facilities are located or proposed to be located can routinely have ambient noise levels in excess of 50 dBA as a result of wind generated noise.

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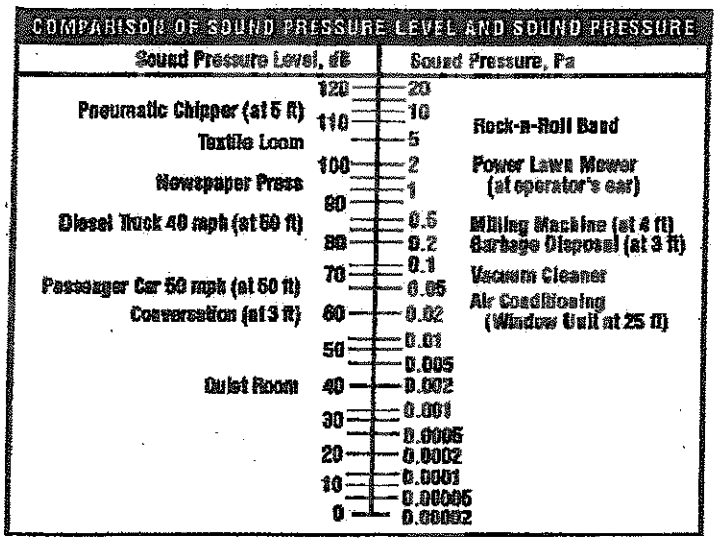

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3. What kinds of noises are expected from wind turbines?

According to several resources, new wind turbines are relatively quiet, and meet federal and international standards and regulations for noise, including Maine's regulations. They do however generate noise that can be measured and assessed for compliance with the state's regulations.

According to the US Department of Energy, a modern wind farm at a distance of 750 – 1,000' is no louder than a kitchen refrigerator or a moderately quiet room.

In terms of residential wind turbines, another Department of Energy source states, "The sound level of most modern residential wind turbines is slightly above the ambient wind noise. This means that while the sound of the wind turbine may be picked out of surrounding noise if a conscious effort is made to hear it, a residential-sized wind turbine is not a significant source of noise under most wind conditions."

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In my review I found no evidence in peer-reviewed medical and public health literature of adverse health effects from the kinds of noise and vibrations heard by wind turbines other than occasional reports of annoyances.

Most studies on health effects of noise have been done using thresholds of 70 dBA or higher outdoors, much higher than what is seen in wind turbines.

Sleep disturbance is another concern, and the WHO guidelines for community noise recommend that outdoor noise levels in living areas for nighttime not exceed 45 dBA, which is consistent with Maine law.

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Low frequency and infrasound (lower than what is perceptible) vibrations are very commonly in our background, and known to be emitted from many household appliances and vehicles. Exposure to very intense low frequency noise can be annoying and may adversely affect overall health, though these levels appear to be more intense than what is measured from modern wind turbines.

Maine noise regulations assess the distribution of noise generated by a regulated project based on its frequency and can regulate noises with a specific tonal contribution that outweighs the other frequency components of the generated noise.

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- Wind turbines mean less dependency on foreign oil and coal that contribute to global warming and pollution (coal produces carbon dioxide, acid rain, smog, particulate pollution, carbon monoxide, and mercury). Maine's highest in the nation rates of asthma and high rates of cancer can be positively impacted by less dependency on these sources.

- According to the Natural Resources Council of Maine: *"If Maine generated five percent of its electricity from wind power by 2010, as called for by the Council,*

there would be significant pollution cuts: 480,000 tons of carbon dioxide; 1,680 tons of sulfur dioxide; and 1,152 tons of nitrogen oxides annually. 'We believe the development of wind power, properly located, should be a centerpiece of Maine's policies to generate clean power, reduce air pollution and halt climate change,' said Peter Didisheim."

7.What about a moratorium on wind turbine projects?

I do not find evidence to support a moratorium on wind turbine projects at this time.

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MORE EDITING FROM DEP 1659

FOAA 26

DRAFT **Wind Turbine Neuro-Acoustical Issues**
February 15, 2009
Dora Anne Mills, MD, MPH Maine CDC/DHHS

1. What protections are in Maine law regarding excessive noise and vibrations?
Maine DEP has rules that apply to all developments in organized areas of the state and in towns without a more restrictive noise ordinance. The rules recognize in its text that excessive noise can degrade health and welfare of nearby neighbors and propose limits based on type of development in the area surrounding the noise. They limit noise levels for routine operation of a proposed development: to 75 dBA at any time; to 60 dBA during the daytime and 50 dBA during the nighttime for non-commercial and non-industrial areas; and to 55 dBA daytime and 45 dBA nighttime for areas in which ambient sounds are 45 dBA or less daytime or 35 dBA or less nighttime.

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Maine DEP also has retained the services of a noise expert to review noise study submissions as part of wind turbine applications and compliance evaluations.

In summary: Maine law appears to essentially place a 45 dBA noise limit on most wind turbine projects in Maine. A 5 dBA variance to limits may be granted upon specific findings that concern pre-development existing ambient noises that are in excess of a particular standard. For compliance with the rule noise levels are measured at the boundary of the property owned by the proposed developer.

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Sources:

- Maine DEP rule-making authority on noise is in Title 38 Section 343
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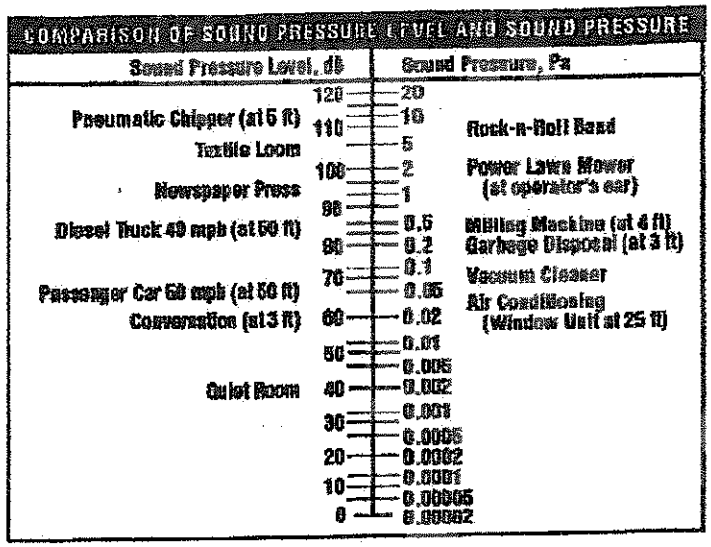

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Breton, Mary B 16 FOAA 31

EXHIBIT tabbies 21B

From: Littell, David P
Sent: Thursday, February 12, 2009 12:25 PM
To: Brooks, James P; Severance, Ronald W; Fisk, Andrew C; Cassida, James
Cc: Boutilier, Lynn A; Garrett, Deborah N
Subject: FW: Wind Turbine Points
Follow Up Flag: Follow up
Flag Status: Red
Attachments: Wind Turbine Points 02 11 09.doc

Jim and Andy, you can see I sent Andy's comments to CDC this morning but asked for 48 hours to make finer revisions if any. So please look at the document again to see if we would suggest any further revisions – and get anything further (as redlines on top of Andy's redline) to Lynn by end of business tommorrow (friday).

Jim/Ron, if you have better information on the avoided pollutants, we can provide. If not, we should look at the NRCM numbers enough to validate or not given that Dr. Mills specifically asked us if we have better numbers. I know this is not what we regularly do.

Thanks.

From: Littell, David P
Sent: Thursday, February 12, 2009 8:58 AM
To: Mills, Dora A.; Harvey, Brenda; Green, Geoffrey; Martins, John A; Kerry, John; Farmer, David W; Ende, Patrick
Cc: Fisk, Andrew C; Garrett, Deborah N; Brooks, James P
Subject: RE: Wind Turbine Points

Attached are quick comments and suggestions on the draft document (which is very good for a quick draft). Our Air Bureau can not validate the NRCM numbers on such a short time frame, but Andy Fisk has been able to look at the noise pieces and has provided suggested edits. Given your tight time schedule to get the information back to the reporter we wanted to provide you with these immediate suggestions. We recommend giving us 48 hours to do a fine read of the document if you intend to release the document itself or post in anywhere.

Thank you for pulling this summary together on such a short timeframe.

David Littell

From: Mills, Dora A.
Sent: Wednesday, February 11, 2009 1:57 PM
To: Harvey, Brenda; Green, Geoffrey; Martins, John A; Littell, David P; Kerry, John; Farmer, David W; Ende, Patrick
Subject: Wind Turbine Points
Importance: High

Attached is a rough draft of a Q&A I drafted to answer the questions that the Sun Journal is asking in response to the Rumford Hospital's medical staff letter calling for a moratorium on wind turbines until further research delineates and mitigates health effects. I've pasted the medical staff's letter below this email. I do not find evidence to support their conclusions, and I state that in the last question in the FAQ. There are no firm statements I could find from non-industry sources stating there are no adverse health effects from wind turbines, but that would be true of most

I did not state this in the Q&A, but unless DEP rules have been recently updated and are not online yet, there may be room for improving the noise rules for developments to take in account wind farms. The last time these rules were updated appear to be 1989. Massachusetts has rules that take in account the change over ambient noise levels rather than a level cap. And, there are some proposals from Canada that take into account low frequency noise emissions. However, that said, I am not a noise expert and Maine is fortunate to have statute and rules on noise levels in place, given that many states do not. I will send my findings under separate a cover to Commissioner Littell on this matter.

Please review the enclosed Q&A and provide any feedback. I started working on this very early (2 am) today, and have also been busy doing other things, so I'm sure it needs some refinement. The reporter wanted to talk with me today or tomorrow, so if I can get feedback on this by late today or early tomorrow am, that would be great, and at least I can use this as my speaking points.

Also, I did not spend much time in the Q&A writing about the medical staff's sources of information, but I did check them out, and can tell the reporter, as I did yesterday (I had checked a few out early yesterday morning after reading the email from Dr. Aniel) that they are not from peer-reviewed studies. Most of the information was not from legitimate sources, though some were and had misinterpreted.

Thank you! Dora

Health hazards Generated by wind turbines

As members of the Rumford Community Hospital medical staff we endorse the concept of alternative energy including but not limited to wind turbines.
As wind turbine generated power has been introduced on an industrial level around the country as well as in the world , there is literature emerging worldwide expressing a multitude of side effects affecting those who live , work, attend school in the vicinity of wind farms.
These health hazards include problems arising not only from the audible noise frequencies but also from inaudible low frequency noise waves.
There are growing scientific observations and studies suggesting that some people living within 2 to 6 miles of these industrial "wind farms" area affected at a variety of levels from a variety of symptoms.
In light of these growing serious medical concerns we propose a moratorium on the building of any such "wind farms" for at least a year and possibly longer until more research is being done on the public health impact that such facilities can and will have on a segment of the communities surrounding such technology.
The Medical Staff of Rumford Community Hospital

1666 18

FOAA 33

Breton, Mary B

From: Littell, David P
Sent: Sunday, February 22, 2009 6:03 PM
To: Garrett, Deborah N; Fisk, Andrew C
Subject: Fw: Wind Turbine Editorial

Attachments: Wind Turbine Points 02 15 09.doc

Wind Turbine Points 02 15 09.d...

Deb, let's discuss after you review.

David Littell, Commissioner
Maine DEP
Via Blackberry

----- Original Message -----
From: Mills, Dora A.
To: Kerry, John; Littell, David P; Farmer, David W; Harvey, Brenda; Green, Geoffrey
Sent: Sun Feb 22 17:58:34 2009
Subject: Wind Turbine Editorial

I'm glad to help address the issues raised in the Sun Journal editorial last Thursday, pasted in below. I do not think there is sufficient evidence at all that this needs to be studied (the proponents of the moratorium do not cite credible studies or grossly misinterpret credible studies). There is evidence that turbines should be built at an adequate distance from houses to avoid annoyances from the noise and vibrations. I've attached the latest draft of the Q&A/fact sheet I've been developing on the topic. Just let me know what I can do to help. Dora

http://www.sunjournal.com/story/304299-3/OurView/A_case_study_for_windmills_and_health/

A case study for windmills and health

Thursday, February 19, 2009

Of course windmills are dangerous. If one of those turbine blades comes unbolted during a gale, for example, it could boomerang around the whole territory and cause awful carnage.

We're kidding. Maybe if Stephen King were writing a new wind turbine-themed thriller set in rural Maine, that would be his plot. The more possible, yet unproven, dangers from windmills come from their operation, and whether unforeseen health effects could stem from it.

The medical staff of Rumford Hospital has voiced its health concerns about windmills, as turbine projects spring up all around them like tulips. There's Record Hill in Roxbury and now Black Mountain in Rumford, for starters. More are sure to come.

Dr. Albert Aniel has led the scrutiny. His concern is straightforward - there have been plenty of things we, as a culture, thought were health-harmless, only to later discover there were dangers that could have been avoided. History tells us this is a salient point.

1667

19

FOAA 34

Breton, Mary B

From:	Littell, David P
Sent:	Thursday, February 12, 2009 4:13 PM
To:	Mills, Dora A.; Harvey, Brenda; Green, Geoffrey; Martins, John A; Kerry, John; Farmer, David W; Ende, Patrick
Cc:	Fisk, Andrew C; Garrett, Deborah N; Brooks, James P
Subject:	Wind power pollutant reductions

Dora, here is the answer on the pollutant reductions we've checked NRCM's statement that generating 5% of the electricity in Maine from wind power would reduce CO2 emissions by 480,000 tons, SO2 by 1,680 tons, and NOx by 1,152 tons, they are close for CO2, but off for SO2 and NOx (of course it does depend on which sources of power generation are replaced by the wind power). DEP engineers calculations based on the following:

DEP's air bureau engineers have checked the NRCM generated figures.

Our annual reductions would be as follows:
CO2: 464,520 TPY vs. NRCM's 480,000 TPY
SO2: 252 TPY vs. NRCM's 1,680 TPY
NOx: 147 TPY vs. NRCM's 1,152 TPY

The on-peak marginal emission rates represent the energy weighted average emission rates of generating units in New England that typically would increase their output when the energy demand increases. These units are referred to as "marginal fossil" units that are fueled with oil (including distillate, residual, diesel, and jet fuel) and/or natural gas. These are generally the higher cost power generating units that are called upon to operate because the lower cost units are already operating, so these marginal emission rates are probably reasonable to use when determining what type of power generation and associated emissions would be replaced by new wind power.

Maine generates about 16.8 million MW-hrs of electricity annually.
5% of this would be 840,000 MW-hrs.
The New England on-peak marginal emission rates are as follows:
CO2: 1,106 lbs/MW-hr
SO2: 0.6 lbs/MW-hr
NOx: 0.35 lbs/MW-hr

We are still having our licensors who deal with noise standard details review the talking points in detail.

Breton, Mary B FOAA 35

From: Littell, David P
Sent: Thursday, February 12, 2009 12:25 PM
To: Brooks, James P; Severance, Ronald W; Fisk, Andrew C; Cassida, James
Cc: Boutilier, Lynn A; Garrett, Deborah N
Subject: FW: Wind Turbine Points
Follow Up Flag: Follow up
Flag Status: Red
Attachments: Wind Turbine Points 02 11 09.doc

Jim and Andy, you can see I sent Andy's comments to CDC this morning but asked for 48 hours to make finer revisions if any. So please look at the document again to see if we would suggest any further revisions – and get anything further (as redlines on top of Andy's redline) to Lynn by end of business tommorrow (friday).

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To: Mills, Dora A.; Harvey, Brenda; Green, Geoffrey; Martins, John A; Kerry, John; Farmer, David W; Ende, Patrick
Cc: Fisk, Andrew C; Garrett, Deborah N; Brooks, James P
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David Littell

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Importance: High

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Health hazards Generated by wind turbines

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There are growing scientific observations and studies suggesting that some people living within 2 to 6 miles of these industrial "wind farms" area affected at a variety of levels from a variety of symptoms.
In light of these growing serious medical concerns we propose a moratorium on the building of any such "wind farms" for at least a year and possibly longer until more research is being done on the public health impact that such facilities can and will have on a segment of the communities surrounding such technology.
The Medical Staff of Rumford Community Hospital

1670

FOAA 37

22

Breton, Mary B

From:	Littell, David P
Sent:	Thursday, February 12, 2009 4:13 PM
To:	Mills, Dora A.; Harvey, Brenda; Green, Geoffrey; Martins, John A; Kerry, John; Farmer, David W; Ende, Patrick
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We are still having our licensors who deal with noise standard details review the talking points in detail.

FOAA 38
63

1671

Breton, Mary B

From: Mills, Dora A.
Sent: Wednesday, February 25, 2009 4:24 AM
To: Fisk, Andrew C; Littell, David P
Cc: Kerry, John; Farmer, David W; Harvey, Brenda
Subject: FW: references and peer review relating health hazards generated by wind turbines
Follow Up Flag: Follow up
Flag Status: Red
Attachments: pierpont-healtheffects-20050301.pdf; committee_siting_of_windfarms location-location.doc; Dr Amanda Harry study.doc; Todd et al, Human vestibular system & low frequency vibration 2008.pdf; committee_vibroacoustic_disease.doc; kamperman-and-james-9-pp.pdf

Dr. Aniel from Rumford Community Hospital has taken his arguments to the Maine Medical Association to try to get their support. Although I was not at their meeting yesterday where this came up (and did not know it was on the agenda, or would have at least attended by phone), I have asked Kellie Miller to allow me to also present to the Committee. I will reach out to a couple of others on the committee ahead of time so this does not come off as a simple point – counter point. Kellie has replied that she is fine for me to present.

My understanding is that one area he discussed that I have a hard time addressing is the DEP regulations on noise levels, essentially being 45 dbl at the property line in rural areas, and the fact that these regulations did not protect residents in Mars Hill who are perceived by some to be living too close from an annoyance perspective from the wind turbine farm there. So, if Andy can arm me with information on the task force process that met last year and how the DEP regulations are being implemented (I understand there are changes underway) to address these concerns or being changed, that would be very helpful.

I've included the documents Dr. Aniel is circulating to the MMA membership. I will also work on an op ed piece these next few days. I thought I'd also email the MMA the fact sheet I did on this topic, so I'd appreciate any feedback on that – let me know if you'd like me to resend it.

Thank you! Dora

From: Kellie Miller [mailto:kmiller@mainemed.com]
Sent: Tuesday, February 24, 2009 6:23 PM
To: Charles Danielson, MD; David Clark, MD; Mills, Dora A.; Lani Graham, MD; Lisa Letourneau, MD; Amy Madden; Andrew MacLean; Arvind Patel, MD; Barbara Wirth, MD; Daniel Oppenheim, MD; Douglas Boyink, MD; Edward Walworth, MD; Erik Steele, DO; Gordon Smith; Gregory D'Augustine, MD; Jacob W. Gerritsen, MD; James H. Maier,MD; James Schneid, MD; Jeff Benson, MD; Jo Linder, MD; John Garofalo, MD; Julian Kuffler, MD; Kellie Miller; Laura Blaisdell, MD, MPH; Lee Ann Baggott MD; Lynnette Nichols; Mitchell Ross, MD; Norma Dreyfus, MD; Richard Evans, MD; Robert Holmberg, MD; Robert McAfee, MD; Ronald Blum, MD; Stephanie Lash, MD; Stephen Sears, MD; Tim Goltz, MD; William Strassberg, MD
Subject: FW: references and peer review relating health hazards generated by wind turbines

Dear Public Health Committee Members - in regards to following up from today's meeting on wind turbine health effects, Dr. Aniel has provided me with the following information for your review. He has agreed to formally present on this subject matter at our next meeting on March 25th, 4-6pm. I look forward to having you with us as we learn more about this emerging issue.

Regards,
Kellie

Kellie P. Miller, M.S.
Director of Public Health Policy
Staff Liaison, Maine Radiological Society & Maine Urological Association

Maine Medical Association
30 Association Drive, P.O. Box 190
Manchester, Maine 04351
Office: 207-622-3374, ext. 229
Cell: 207-462-5713
Fax: 207-622-3332
kmiller@mainemed.com

Kellie P. Miller, M.S.
Downeast Association of Physician Assistants
Staff Liaison
30 Association Drive, P.O. Box 190
Manchester, Maine 04351
Office: 207-620-7577
Fax: 207-622-3332
deapa@mainemed.com

"There's more to see than can ever be seen;
more to do than can ever be done." (From the Lion King)

-----Original Message-----
From: athos [mailto:athos@wildblue.net]
Sent: Tuesday, February 24, 2009 6:11 PM
To: Kellie Miller
Subject: references and peer review relating health hazards generated by wind turbines

Hi Kellie
Here are some references but another good and inclusive web site which includes WHO recommendations is:www.windturbinenoisehealthhumanrights.com (the bible of references covering multiple studies).
Also Dr Pierpont's www.windturbinesyndrome.com and www.wind-watch.org
Let me know if you got this and if further information is needed for now.
What I have sent you covers pretty well all the issues
Albert Aniel MD

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pierpont-healtheffects-20050301
committee_siting_of_windfarms location-location
Dr Amanda Harry study
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committee_vibroacoustic_disease
kamperman-and-james-9-pp

Note: To protect against computer viruses, e-mail programs may prevent sending or receiving certain types of file attachments. Check your e-mail security settings to determine how attachments are handled.

25

Breton, Mary B

FOAA 40

1673

From: Mills, Dora A.
Sent: Wednesday, February 25, 2009 1:11 PM
To: Fisk, Andrew C
Cc: Boutilier, Lynn A
Subject: RE: references and peer review relating health hazards generated by wind turbines

It would greatly help me if sooner than later someone sent me a brief update on how DEP is addressing the noise issues. Wasn't there a task force last year? Aren't there revisions to the rules or how they're carried out you're considering or implementing? This issue seems to be gaining traction....

Thanks! Dora

From: Fisk, Andrew C
Sent: Wednesday, February 25, 2009 8:57 AM
To: Mills, Dora A.
Cc: Boutilier, Lynn A
Subject: RE: references and peer review relating health hazards generated by wind turbines

Dora,

I talked with David this morning. I take it you will be presenting at MMA on 3/25. I will try and talk with you early next week, as we have a pending conversation with our peer reviewer about aspects of our noise rule that you should be aware of in this conversation.

We will get you the minor edits to your piece asap.

Please let me know if this timing doesn't work for your conversations with MMA. I want to be sure your statements and conversations follow what our peer reviewer is presently thinking. We're talking with him today and will likely want to set up something for either you or a delegate on this to discuss with us jointly next week.

Hope you're feeling better.

Andrew Fisk
Bureau Director, Land & Water Quality
Maine Department of Environmental Protection

207-287-7671
www.maine.gov/dep

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Sent: Wednesday, February 25, 2009 4:24 AM
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---Original Message---
From: athos [mailto:athos@wildblue.net]
Sent: Tuesday, February 24, 2009 6:11 PM

12

FOAA 42

1675

To: Kellie Miller
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Also Dr Pierpont's www.windturbinesyndrome.com and www.wind-watch.org
Let me know if you got this and if further information is needed for now.
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committee_vibroacoustic_disease
kamperman-and-james-9-pp

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1676 23 FOAA 43

Breton, Mary B

From: Boutilier, Lynn A
Sent: Thursday, February 26, 2009 9:03 AM
To: Fisk, Andrew C
Subject: FW: Wind Turbine

Attachments: Wind Turbine Points 02 15 09.doc

Wind Turbine Points 02 15 09.d...

This is what you sent. I'll go look for Jim's on David's computer.

-----Original Message-----
From: Fisk, Andrew C
Sent: Thursday, February 19, 2009 8:19 AM
To: Boutilier, Lynn A
Subject: FW: Wind Turbine

Edits and comment attached.

Andrew Fisk
Bureau Director, Land & Water Quality
Maine Department of Environmental Protection

207-287-7671
www.maine.gov/dep

-----Original Message-----
From: Littell, David P
Sent: Thursday, February 19, 2009 7:00 AM
To: Brooks, James P; Fisk, Andrew C; Cassida, James
Cc: Garrett, Deborah N; Boutilier, Lynn A
Subject: Fw: Wind Turbine

Please review for final comments and coordinate your redlines with Deb and Lynn so we send back one version.

Last week BLWQ's edits were made but BAQ's were missed by CDC because (my fault) we sent over separately due to press of time.

Lynn, please send Jim Brooks my email to Dora et al with final air edits which I cleaned up before sending on. Thanks!

David

David Littell, Commissioner
Maine DEP
Via Blackberry

----- Original Message -----
From: Mills, Dora A.
To: Littell, David P; Fisk, Andrew C
Sent: Thu Feb 19 06:55:14 2009
Subject: Wind Turbine

The wind turbine noise and health issue keeps arising. The Maine Public Health Association has been contacted for their opinion, etc. Attached is a revised version of the Q&A I quickly developed last week. I'd appreciate any further review or suggestions on this. I'd like to be able to provide it as a resource to those interested in this

topic. Thank you! Dora

1678 30 FOAA 45

Breton, Mary B

From: Boutilier, Lynn A
Sent: Tuesday, March 03, 2009 1:46 PM
To: Fisk, Andrew C
Subject: Wind Turbine Points revised 2-26-09.doc

Attachments: Wind Turbine Points revised 2-26-09.doc

Wind Turbine Points revised 2-...

31

FOAA 46 1679

Breton, Mary B

From: Mills, Dora A.
Sent: Thursday, March 19, 2009 5:33 PM
To: Fisk, Andrew C
Subject: RE: Wind Turbine

These are great edits, esp the ones on the LFN. Thank you! Dora

---

From: Fisk, Andrew C
Sent: Thursday, March 19, 2009 5:30 PM
To: Mills, Dora A.
Subject: FW: Wind Turbine

Take a read through my suggested edits that get to the recent work we've done with the consultant. If its not clear, give a call and we can chat. 592-0327 is my direct line.

Andrew Fisk
Bureau Director, Land & Water Quality
Maine Department of Environmental Protection

207-287-7671
www.maine.gov/dep

From: Mills, Dora A.
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Subject: Wind Turbine

http://web.mit.edu/aeroastro/partner/reports/proj1/lfnreport-2007-001.pdf

Next Wednesday afternoon is the discussion at the Maine Medical Association on wind turbines. There are two physicians promoting the moratorium – Dr. Aniel from Rumford and a radiologist from Fort Kent (forget his name, but he's been in the papers on this issue). Angus King will be there as well as myself. This meeting doesn't usually attract too many, but with Angus' appearance, who knows. If you or the noise consultant want to attend, I believe that's fine. It certainly seems like things have ratcheted up a bit!

I'm including the revised FAQ attached, which includes your edits (thank you!) as well as a bit more info. After reading a bit more, including the airport study linked to above, I can see why the consultant and you were discussing how the A filter does not reflect the full impact of LFN.

Are there any updates that I should know about before this meeting – updates about any review of the rules, etc?

Thank you so much! Dora

1680 32

Breton, Mary B FOAA 47

From: Mills, Dora A.
Sent: Thursday, March 19, 2009 5:34 PM
To: Fisk, Andrew C
Subject: RE: Wind Turbine

nd, just to clarify, adding the requirement for the dBC measurement is being done within the existing rule?

---

rom: Fisk, Andrew C
ent: Thursday, March 19, 2009 5:30 PM
o: Mills, Dora A.
ubject: FW: Wind Turbine

ake a read through my suggested edits that get to the recent work we've done with the consultant. If its not clear, give a call nd we can chat. 592-0327 is my direct line.

Andrew Fisk
Bureau Director, Land & Water Quality
Maine Department of Environmental Protection

207-287-7671
www.maine.gov/dep

From: Mills, Dora A.
Sent: Thursday, March 19, 2009 1:11 PM
To: Fisk, Andrew C
Subject: Wind Turbine

http://web.mit.edu/aeroastro/partner/reports/proj1/lfnreport-2007-001.pdf

Next Wednesday afternoon is the discussion at the Maine Medical Association on wind turbines. There are two physicians promoting the moratorium – Dr. Aniel from Rumford and a radiologist from Fort Kent (forget his name, but he's been in the papers on this issue). Angus King will be there as well as myself. This meeting doesn't usually attract too many, but with Angus' appearance, who knows. If you or the noise consultant want to attend, I believe that's fine. It certainly seems like things have ratcheted up a bit!

I'm including the revised FAQ attached, which includes your edits (thank you!) as well as a bit more info. After reading a bit more, including the airport study linked to above, I can see why the consultant and you were discussing how the A filter does not reflect the full impact of LFN.

Are there any updates that I should know about before this meeting – updates about any review of the rules, etc?

Thank you so much! Dora

Breton, Mary B

From: Mills, Dora A.
Sent: Friday, March 20, 2009 3:37 PM
To: Fisk, Andrew C; Littell, David P
Subject: Wind Turbine Research
Importance: High

was contacted by Peter Rabinowitz, MD, who is an Associate Professor of Medicine at Yale School of Medicine as well as the irector of Clinical Services in Occupational and Environmental Medicine at Yale, and specializes in health issues related to oise. As you can see from Yale's website (http://www.med.yale.edu/intmed/faculty/rabinowitz.html) he has an impressive track ecord of conducting peer reviewed original research, including many that were federally-funded.

le is interested in applying for a NIH grant to study health effects of noise related to wind turbines. He'd like to use the Mars Hill ommunity as one of the sites to study. We just talked at length by phone, and his take on the situation is that the increasing xpressed concerns about noise and health effects related to wind turbines, especially as they relate to low frequency noise, eeds to be addressed with some non-biased research.

shared with him the FAQ that I wrote recently and that Andy has helped me with. He asked if I would write a letter of support or the grant application. He's going to send me a brief description of it in writing, but it sounds like the kind of research we'd vant to support? I'd like to write a letter of support, but certainly would not want to do so without your okay. He is including a ommunity participation component, a focus on the 18 families living within ~half mile, and a measurement piece taken in each season of the year and including some low frequency noise (dBC) measurements. This will go through Yale's IRB.

told him that Andy is really the person he should be in contact with, and he is eager to talk with you. The grant application is due April 1st, so he's eager to connect, though will need to connect more thoroughly if it is funded.

His email address is: Peter.Rabinowitz@yale.edu

His direct line # is: 203-785-7267

Thank you! Dora

1682 34 FOAA 49

Breton, Mary B

From: Littell, David P
Sent: Friday, March 20, 2009 4:27 PM
To: Mills, Dora A.; Fisk, Andrew C
Subject: RE: Wind Turbine Research

Dora, more data and analysis by a world-class expert can only help. The issue for me is whether Mars Hill is the best site since already evaluated by our expert and the companies. We are putting special conditions for additional monitoring into the permits we are considering now and one of those two sites or both may be better or good for additional data. Andy, any thoughts one which site?

Certainly we can support the NIH grant application.

David

From: Mills, Dora A.
Sent: Friday, March 20, 2009 3:37 PM
To: Fisk, Andrew C; Littell, David P
Subject: Wind Turbine Research
Importance: High

I was contacted by Peter Rabinowitz, MD, who is an Associate Professor of Medicine at Yale School of Medicine as well as the Director of Clinical Services in Occupational and Environmental Medicine at Yale, and specializes in health issues related to noise. As you can see from Yale's website (http://www.med.yale.edu/intmed/faculty/rabinowitz.html) he has an impressive track record of conducting peer reviewed original research, including many that were federally-funded.

He is interested in applying for a NIH grant to study health effects of noise related to wind turbines. He'd like to use the Mars Hill community as one of the sites to study. We just talked at length by phone, and his take on the situation is that the increasing expressed concerns about noise and health effects related to wind turbines, especially as they relate to low frequency noise, needs to be addressed with some non-biased research.

I shared with him the FAQ that I wrote recently and that Andy has helped me with. He asked if I would write a letter of support for the grant application. He's going to send me a brief description of it in writing, but it sounds like the kind of research we'd want to support? I'd like to write a letter of support, but certainly would not want to do so without your okay. He is including a community participation component, a focus on the 18 families living within ~half mile, and a measurement piece taken in each season of the year and including some low frequency noise (dBC) measurements. This will go through Yale's IRB.

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His email address is: Peter.Rabinowitz@yale.edu

His direct line # is: 203-785-7267

Thank you! Dora

Breton, Mary B

From: Mills, Dora A.
Sent: Friday, March 27, 2009 3:57 AM
To: Fisk, Andrew C; Littell, David P
Subject: RE: Wind Turbine Issue at MMA

probably dropped the ball – I think Dr. Rabinowitz is expecting to hear from you at your convenience. The application to NIH is due I think today, but he's very interested in any monitoring data you have to provide insights. I think Dr. Nissenbaum's non-scientific study points out the need for a scientific approach if there is to be more research. His contact info is below. Thanks!
Dora

dmr9@email.med.yale.edu

peter.rabinowitz@yale.edu

(203) 785-7267

From: Fisk, Andrew C
Sent: Thursday, March 26, 2009 9:15 AM
To: Mills, Dora A.; Littell, David P
Subject: RE: Wind Turbine Issue at MMA

Thanks – the Sun Journal article seemed reasonable.

Let me know if you need anything else in the interim. I have not heard from the Yale researcher you mentioned.

Andrew Fisk
Bureau Director, Land & Water Quality
Maine Department of Environmental Protection

207-287-7671
www.maine.gov/dep

From: Mills, Dora A.
Sent: Thursday, March 26, 2009 6:00 AM
To: Fisk, Andrew C; Littell, David P
Subject: Wind Turbine Issue at MMA

The meeting last evening at the Maine Medical Association went okay - very interesting, as it was my first experience with a number of players in the room. Besides some genuinely interested physicians and leadership from the medical society, there were several representatives from the wind industry, including from an association, First Wind, and the company that former Gov Angus King is heading up. There was also Drs. Nissenbaum and Aniel, to present their case for a moratorium.

The latter two were very insistent that they present last, which seemed odd since the only reason we were all there was because of the issues they were bringing forward. But, I didn't push too strongly on that.

Angus presented first, and was quite eloquent. He made the case that the entire issue boils down to siting, and he talked about how he thought a number of homes in Mars Hill are just too [illegible] then talked for 15 minutes as well - telling my story of how I was contacted by Dr.

1684 36 FOAA 51

Breton, Mary B

From: Mills, Dora A.
Sent: Friday, March 27, 2009 4:01 AM
To: Peter Rabinowitz, MD 2; Peter Rabinowitz, MD ; Fisk, Andrew C; Littell, David P
Subject: Maine DEP - Yale Connections

This email's purpose it to connect Dr. Peter Rabinowitz with Maine DEP. Andy Fisk is the Director of Land and Water Quality, and David Littell is DEP Commissioner.

Peter – DEP has expressed interest in your possible research in the Mars Hill area, but I know you can describe your proposal better than I can. Additionally, they have quite a bit of monitoring data that may be helpful.

Thank you! Dora

Breton, Mary B

From: Littell, David P
Sent: Friday, March 27, 2009 2:22 PM
To: Fisk, Andrew C; 'Peter Rabinowitz'; Mills, Dora A.
Cc: 'Peter Rabinowitz, MD 2'
Subject: RE: Maine DEP - Yale Connections

Andy, thanks. I'll let you brief Dr. Rabinowitz. My thinking is that we've looked hard at Mars Hill with a year of data, albeit not necessarily the quality or scope of data the Dr. Rabinowitz would collect.

Because sound propagation and receptor impacts in mountainous, hilly and/or forested terrain is potentially influenced by topography, time of year issues (snow, ice cover, lack of foliage), we know we want to collect such data at one or both of the current wind sites under review by the department if permitted. My thinking is it is worth considering looking at one or both of those sites if they are permitted and built this summer (study beginning next winter over all four seasons).

Having a different and extensive data set to compare to Mars Hill in different topography, conditions and different receptor locations may be more helpful to develop a comprehensive expertise with our consultants and the CDC as Maine is projected to continue to see wind power proposals given our wind resource in many areas of the state. Dr. Rabinowitz's expert analysis would be most helpful.

Dora, thank you for thorough work and providing your independent expertise to date and identifying Dr. Rabinowitz's as a resource for both CDC and DEP.

Best,

David

-----Original Message-----
From: Fisk, Andrew C
Sent: Friday, March 27, 2009 1:26 PM
To: Peter Rabinowitz; Mills, Dora A.
Cc: Peter Rabinowitz, MD 2; Littell, David P
Subject: RE: Maine DEP - Yale Connections

Peter,

Let's talk at your convenience about your study design and scope. We can offer some thoughts given the existing and pending projects coming on line in several locations in the state.

My direct line is 207-592-0327.

Andrew Fisk
Bureau Director, Land & Water Quality
Maine Department of Environmental Protection

207-287-7671
www.maine.gov/dep

-----Original Message-----
From: Peter Rabinowitz [mailto:Peter.Rabinowitz@yale.edu]
Sent: Friday, March 27, 2009 11:26 AM
To: Mills, Dora A.
Cc: Peter Rabinowitz, MD 2; Fisk, Andrew C; Littell, David P
Subject: Re: Maine DEP - Yale Connections

Mills, Dora A. wrote:
>

Breton, Mary B

From: Mills, Dora A.
Sent: Friday, April 10, 2009 6:18 PM
To: Littell, David P; Fisk, Andrew C; Farmer, David W
Cc: Harvey, Brenda; Green, Geoffrey
Subject: FW: I suspect you already received the certified mail letter please acknowledge receipt

'll go ahead and draft a response but not send it until you've reviewed it. Dora

---

From: athos [mailto:athos@wildblue.net]
Sent: Friday, April 10, 2009 9:34 AM
To: Mills, Dora A.
Subject: I suspect you already received the certified mail letter please acknowledge receipt

Dear Dr.Mills

I believe that the meeting of 03/25/09 was useful on several fronts.

As Dr.Nissenbaum has shown ,the Mars Hill people living within 3500 feet of the Turbine project there are truly suffering, in a real medical sense. Clearly, any regulation that results in placement of turbine, anywhere, in Maine, at less than 3500 feet setback is courting a bad human outcome, regardless of the sound modeling used by the industry to show that there will be no ill effects in that range.

Mr.King acknowledged that the Mars Hill project was a total fiasco. His partner Mr.Gardiner went on to acknowledge serious problems in Freedom, Me. He went on at some length about this after the meeting closed.

Please note that the same acoustic consultants used at Mars Hill performed the noise modeling studies for Stetson II , Rollins and Record Hill and the same assumptions were used for each of these projects. This is worrisome.

As is clearly demonstrated by the post construction measurements at Mars Hill, the model used by the wind industry for that project was seriously flawed. Among other things it seems to have disregarded line source effects of multiple turbines in a linear arrangement perpendicular to residential neighborhoods, and of course ignores low frequency dBC detected noise even though low frequencies are known to travel much longer distances and are shown to correlate with turbine related health effects, particularly sleep disturbance, and all the negatives that flow from that fundamental ill effect.

We can reasonably conclude that the MDEP and DHHS are currently unprepared and largely unaware of the noise and health issues related to wind factories. We can all agree that we need to ensure that additional Maine citizens should not suffer the same results as those Mars Hill residents who live within 3500 feet. In this regard, please note that there are no residents living between 3500 feet and approximately a mile and a quarter or so. As such, we cannot state what distance between those two is the point at which ill effects abate, if they do at all within that range. The sound regulations imposed by European jurisdictions effectively result in setbacks of 1 to 1.5 miles depending upon the topography. We can now state with some confidence that ill effects are likely when homes are placed within 3500 feet of a ridge line arrangement of turbines. Ridgeline placements seems to be the prevalent pattern of turbine placement the industry would like to impose upon Maine.

It is logical for us to expect the State regulatory agencies to familiarize themselves as soon as possible with the relevant physics and physiology, and put appropriate setback regulations in effect before additional turbines are placed.

For example we noted that the MDEP, in its variance issued to First Wind regarding Mars Hill, described the

allowance to 50 dBA as creating a noise "similar to songbirds". This statement alone speaks to the lack of understanding of the nature of sound and a failure to appreciate that a dBA level alone is just one component of a sound's makeup. One can no more describe a sound by its dBA level alone than describe a Van Gogh painting by saying "it is blue"

We believe that if poor outcomes such at Mars Hill and Freedom are to be avoided, it becomes necessary to stop rushing ahead with a "gold rush" mentality, relying solely on the clearly faulty wind modeling currently used by the projects we are aware of, which have to this point been rubberstamped by MDEP and LURC.

Tangentially we note that Mr. King was in error when he stated that Maine's guidelines where close to those of the World Health Organization.

There is a world of difference between 30 dBA and 45dBA. The WHO furthermore goes on to state that when low frequency sounds are part of the noise pollution, levels lower than 30 dBA or incorporating dBC parameters should be used.

As physicians and clinicians it is our foremost duty to do no harm. It is reasonable to adopt the current best practices of jurisdictions that have decades of experience with these technologies. We must look to France, Germany, Holland and the like in this regard, and slow down the permitting until those regulations are in place. France enacted regulations in 2006 stipulating that a level of 25 dBA should not be exceeded in the home and the WHO recommends that no industry should be allowed to increase ambient daytime noise (L90) by 5 dBA and nighttime noise (L90) by 3 dBA. The WHO also recommends that bedroom noise level should not exceed 30 dBA.

Modeling done by the wind companies must take into account allowances for icing on the blades (+6dBA) as well as pulsatility and line source effects among other things. It is easy for the industry to manipulate the models to provide results that they are looking for, which can then be somehow overlooked by the third party consultants hired by MDEP, if they are not diligent.

We know this can happen since it has happened and is now fully documented in the case of Mars Hill. First Wind representatives at the MMA meeting admitted to having made a serious mistake, yet we have no regulations on the books to ensure they do not do so again.

Furthermore the State must have means to not only check for compliance but also enforce compliance with credible threats to insure compliance, up to and including the ordering of stopping turbine rotation and where necessary the removal of non compliant turbines.

We have concerns that MDEP is currently not up to this task, given their recent statements regarding their current overburdened status.

As you see there are many issues that still need to be worked out. A moratorium under such circumstances is certainly logical, unless we quickly move to the adoption of more stringent European and Australian standards.

The State's failure to act responsibly on this issue is equivalent to abandoning it's responsibility to protect the health of Maine's citizens, leaving them with little option but to seek remedy and redress thru the courts.

Sincerely and respectfully,

Michael Nissenbaum MD

Northern Maine Medical Center

Albert Aniel MD

Rumford Hospital

cc. Honorable John Baldacci Governor

Senator P.Bartlett : Senate Majority

1688 40

FOAA 55

> Dear Dora, David, and Andy,
>
Thank you for the email. As Dora has mentioned, we have been working on a grant to NIEHS to do an assessment study of wind turbine sound (including low frequency, "infrasound" and vibration) and shadow flicker exposures and also do some surveying of reported health symptoms and annoyance of nearby residents. It does seem there is a need for some objective research in this regard, I realize the topic is getting pretty polarized and there may be more hyperbole than evidence at present. We had been planning to use Mars Hill as a potential study site, although this was before another party (unbeknownst to us) conducted a symptom survey there recently.
It would be wonderful to share some ideas about these issues, especially since you have spent so much time in the field doing some assessments.
We are trying to identify the most valuable ways to add to existing knowledge, not reinvent wheels, looking forward to being in touch, best, Peter Rabinowitz MD MPH

> This email's purpose it to connect Dr. Peter Rabinowitz with Maine
> DEP. Andy Fisk is the Director of Land and Water Quality, and David
> Littell is DEP Commissioner.
>
> Peter - DEP has expressed interest in your possible research in the
> Mars Hill area, but I know you can describe your proposal better than
> I can. Additionally, they have quite a bit of monitoring data that may
> be helpful.
>
>
> Thank you! Dora
>

Senator K.Ray : Senate Minority

FOAA 56

Representative J.Piotti : House Majority

Representative J.A.Tardy : House Minority

Doctor C.Danielson : Chair MMA Public Health Committee

David P.Littel : MDEP

1690 4/2

FOAA 57

Breton, Mary B

From: Mills, Dora A.
Sent: Monday, August 03, 2009 7:30 PM
To: Fisk, Andrew C
Subject: FW: August 12th Wind Energy Subcommittee Meeting cancelled

Attachments: Wind Energy Draft Resolution 7-29-09.doc

Wind Energy Draft Resolution 7...

Can you provide comments on this draft resolution - I'm glad to submit them to MMA? Thanks! Dora

-----Original Message-----
From: Kellie Miller [mailto:kmiller@mainemed.com]
Sent: Monday, August 03, 2009 2:12 PM
To: Albert Aniel, MD; Charles Danielson, MD; Mills, Dora A.; Gordon Smith; Kellie Miller; Lani Graham, MD; Larry and Daniel Mutty, MD; Michael Nissenbaum, MD; Norma Dreyfus, MD; Richard Jennings, MD; Ted Walworth, MD
Subject: August 12th Wind Energy Subcommittee Meeting cancelled

Sent on behalf of Dr. Danielson:

Re: Wind Energy Subcommittee:

Many members of this subcommittee are passionate and hold strong views on this issue. Our mission is to recommend a policy direction for the MMA. It is my opinion and that of the MMA Executive Committee that another meeting of the subcommittee is unlikely to result in a better recommendation. Therefore we are canceling the 8/12/09 subcommittee meeting. We will present a draft (current form is attached) to the Public Health Committee on 8/26/09, 4-6pm at the MMA office. I appreciate your having taken the trouble to compile a great deal of information. Since we are under time constraints to develop the policy statement for this draft resolution ,the most efficient way to get this done will be for me to sit down with Kellie and go over the material that has already been submitted, along with any new evidence-based information you would like to provide by August 12th.
Regards,
Charles Danielson, MD, Chair, MMA Public Health Committee

<<Wind Energy Draft Resolution 7-29-09.doc>>

Kellie P. Miller, M.S.
Director of Public Health Policy
Staff Liaison, Maine Radiological Society & Maine Urological Association Maine Medical Association 30 Association Drive, P.O. Box 190 Manchester, Maine 04351
Office: 207-622-3374, ext. 229
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Fax: 207-622-3332
kmiller@mainemed.com

Kellie P. Miller, M.S.
Downeast Association of Physician Assistants Staff Liaison 30 Association Drive, P.O. Box 190 Manchester, Maine 04351
Office: 207-620-7577
Fax: 207-622-3332
deapa@mainemed.com

Breton, Mary B

From: Mills, Dora A.
Sent: Monday, September 14, 2009 8:34 PM
To: Fisk, Andrew C
Subject: RE: Maine Med resolution on wind power

I just found it - it's actually awful. Especially the "Whereas'" I'm appalled they passed something like this! Kellie Miller said the few people in the room were all new to the issue, had no idea what the issue was about, and were quite swayed that this was pretty harmless...At least someone can say in response that the membership that spent time on this issue - the Public Health Committee - voted 9 to 1 against a similar resolution.

Dora

-----Original Message-----
From: Fisk, Andrew C
Sent: Monday, September 14, 2009 8:29 PM
To: Mills, Dora A.
Subject: Re: Maine Med resolution on wind power

Tx. I saw it on the industrial wind action page. No need to send it.

Andrew Fisk
Maine DEP, Land & Water Quality

- sent via Blackberry, apologies for brivty or typos

----- Original Message -----
From: Mills, Dora A.
To: Fisk, Andrew C
Sent: Mon Sep 14 20:13:33 2009
Subject: RE: Maine Med resolution on wind power

It's a long story, but yes, the Public Health Committee voted about a month ago 9 to 1 not to forward a resolution. However, any MMA member can introduce a resolution on their own. So, Dr. Aniel submitted a resolution on his own. The resolutions were taken up and discussed early Saturday morning, when there were not many members present, and I understand no members of the PH Committee were present. So, he made his case, and some kind of resolution passed, though I guess it was fairly harmless sounding. I think Kellie has sent me a copy of it, and I'll forward it to you. Ugh.....I was due to arrive not until Sunday morning, so did not attend Saturday morning. Dora

---

From: Fisk, Andrew C
Sent: Monday, September 14, 2009 4:49 PM
To: Mills, Dora A.
Subject: FW: Maine Med resolution on wind power

Kellie is out this week, do you know the answer?

Andrew Fisk

Bureau Director, Land & Water Quality

Maine Department of Environmental Protection

1692

FOAA 59

Breton, Mary B

From: Mills, Dora A.
Sent: Monday, September 14, 2009 8:14 PM
To: Fisk, Andrew C
Subject: RE: Maine Med resolution on wind power

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From: Fisk, Andrew C
Sent: Monday, September 14, 2009 4:49 PM
To: Mills, Dora A.
Subject: FW: Maine Med resolution on wind power

Kellie is out this week, do you know the answer?

Andrew Fisk
Bureau Director, Land & Water Quality
Maine Department of Environmental Protection

207-287-7671
www.maine.gov/dep

From: Fisk, Andrew C
Sent: Monday, September 14, 2009 4:35 PM
To: kmiller@mainemed.com
Subject: Maine Med resolution on wind power

Kellie,

Someone sent me this link:

http://www.windaction.org/documents/23095

which indicates MMA did adopt a resolution on windpower on 9/12. Is this accurate? I thought the Public Health committee didn't vote to endorse a resolution.

Let me know if you could, thanks. Hope things are well,

Andy

Andrew Fisk
Bureau Director, Land & Water Quality
Maine Department of Environmental Protection

207-287-7671
www.maine.gov/dep

Breton, Mary B

From: Callahan, Beth
Sent: Wednesday, August 19, 2009 4:09 PM
To: Fisk, Andrew C; Richardson, Marybeth; Kelley, Lorraine; Woods, Melanie R
Subject: Record Hill Wind, LLC L24441AN&BN

Done with revisions. Ready for your review and signature.

Z:\L&W\LAND-RR\Towns CMRO Internal\LICENSES\Record Hill Wind, LLC. L24441AN&BN.doc

Melanie – See Lorraine. I know she would like your help with the final distribution of this Order. I will send you the email distribution list in a separate email.

Thanks,
BETH CALLAHAN
Project Manager
ME Dept. of Environmental Protection
Division of Land Resource Regulation